

**Commonwealth of Kentucky
Environmental and Public Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382**

**AIR QUALITY PERMIT
Issued under 401 KAR 52:040**

Permittee Name: Modine Manufacturing Company
Mailing Address: 551 Tapp Road, Harrodsburg, Kentucky 40330

Source Name: Modine Manufacturing Company
Mailing Address: 551 Tapp Road
Harrodsburg, Kentucky 40330

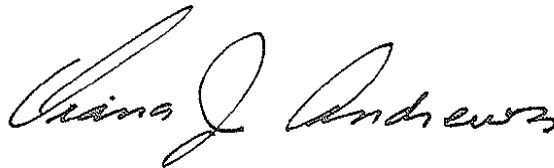
Source Location: Same as above

Permit: S-07-129
Agency Interest: 3153
Activity: APE20070002
Review Type: State Origin
Source ID: 21-167-00014

Regional Office: Frankfort Regional Office
643 Teton Trail, Suite B
Frankfort, KY 40601-1758
(502) 564-3358

County: Mercer

Application
Complete Date: September 14, 2007
Issuance Date: October 25, 2007
Revision Date:
Expiration Date: October 25, 2017



**John S. Lyons, Director
Division for Air Quality**

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:040, State-origin permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining other permits, licenses, or approvals that may be required by the Cabinet or other federal, state, or local agencies.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS**EP#03 (06, 11, &12)****Electrocoat Paint Line (E-Coat)****Description:**

Electrodeposition surface coating unit: includes a drying oven and an ultrafiltration membrane

Maximum processing rate (black epoxy): 0.714 gallon per hour applicator capacity

Maximum processing rate (clear epoxy): 1.429 gallon per hour applicator capacity

Construction Commenced: 1980

EP#33 and EP#38, (#61 and #60)**Thermal Degreasers (identical units)****Description:**

Thermal units designed to remove and destroy hydrocarbon grease

Maximum processing rate: 1.28 gallons consumed (oil) per hour (both units)

Construction Commenced: 10/1/2006

Control Equipment: Integrated Thermal Oxidizer

APPLICABLE REGULATIONS:

401 KAR 59:010. New process operations, applicable to each affected facility or source, associated with a process operation, which is not subject to another emission standard with respect to particulates, commenced on or after July 2, 1975.

1. Operating Limitations:

The affected facility shall operated so as not to exceed the emission limitations in Section B (2) Emission Limitations.

2. Emission Limitations:**a. Pursuant to 401 KAR 59:010**

- i. Section 3 (1), opacity shall not exceed 20%.
- ii. Section 3 (2), hourly particulate emissions for each emission point shall not exceed the following limit:

For process rates up to 1,000 lbs/hr: $E = 2.34$

For process rates up to 60,000 lbs/hr: $E = 3.59 P^{0.62}$

For process rates in excess of 60,000 lbs/hr: $E = 17.31 P^{0.16}$

For the equations: E = rate of emission in lb/hr and P = process weight rate in tons/hr (monthly throughput in tons/monthly hours of operation).

Compliance Demonstration:**(1) Opacity Standard:**

Compliance with the opacity standard shall be determined by conducting a qualitative visual observation of the opacity of emissions at each stack no less than weekly and maintaining a log of the observations. If visible emissions from the stacks are seen (not including condensed water in the plume), then an inspection of control equipment shall be initiated and corrective action taken. If visible emissions are present after the corrective action, the process shall be shut down and shall not operate again until repairs have been made that result in no visible emissions from the process during operation. In lieu of shutting the process down, the permittee may

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

determine the opacity using Reference Method 9. If the opacity limit is not exceeded, the process may continue to operate.

(2) The source is considered to be in compliance with the mass emission limitation above based on the coating application method and material usage rates as provided in the permit application.

3. Testing Requirements:

Testing shall be conducted at such times as may be required by the Cabinet in accordance with 401 KAR 59:005, § 2(2) and 50:045, § 4.

4. Specific Monitoring Requirements:

- a. See Section B (5) Specific Recordkeeping Requirements.
- b. The permittee shall monitor opacity from each stack weekly during periods of operation as specified in Compliance Demonstration Method (1) above.

5. Specific Recordkeeping Requirements:

- a. Records of the amounts of all coatings, additives, and clean-up solvents used per month and the VOC and HAP content of each material shall be maintained. Records of monthly emission totals and emissions from the proceeding (12) month period shall be maintained. Records kept shall be sufficient such that the permittee is capable of demonstrating compliance with minor source status if requested to do so by the Cabinet. Such records will contain as a minimum;
 - (1) Purchase orders or receipts showing the amount of each VOC and HAP containing material used each month.
 - (2) MSDS, Manufacturer's Certified Product Data Sheets, or the results of EPA reference test methods from which the VOC and HAP content of each material can be obtained.
 - (3) Emission totals and sample calculations.
- b. When operating the affected facilities uncontrolled, all VOC and HAP emitted during any specified time period shall be considered to equal the total amount of VOC and HAP purchased and used during that specific time period. Refer to Section C, 6.a.(3).
- c. The permittee shall maintain records of corrective actions taken as a result of seeing visible emissions from a stack, including date and time.
- d. The permittee shall maintain records of Method 9 readings performed.

6. Specific Reporting Requirements:

- a. See Section C - General Condition 3
- b. The permittee will report 12 month VOC and HAP emissions as part of the 6 month reporting required by General Condition, 3.c.

7. Specific Control Equipment Operating Conditions:

None.

8. Alternate Operating Scenarios: N/A

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**EU#14 (35)****Copper Coil Brazing****Description:**

Copper coil heat exchangers brazing

Maximum processing rate: 1.0 pound per hour braze ring and wire flux

Construction Commenced: 08/79

APPLICABLE REGULATIONS:

Regulation 401 KAR 59:010: New process operations.

1. Operating Limitations:

None

2. Emission Limitations:

- a. i. Pursuant to 401 KAR 59:010, Section 3, opacity shall not exceed 20%.
- ii. Pursuant to 401 KAR 59:010, Appendix A, The emissions of particulate matter shall not exceed the allowable rate limit as calculated by the following equations using the process weight rate (in units of tons/hr).

For process rates up to 1,000 lbs/hr:	$E = 2.34$
For process rates up to 60,000 lbs/hr:	$E = 3.59 P^{0.62}$
For process rates in excess of 60,000 lbs/hr:	$E = 17.31 P^{0.16}$

For the equations: E = rate of emission in lb/hr and P = process weight rate in tons/hr (monthly throughput in tons/monthly hours of operation).

Compliance Demonstration Method:

401 KAR 59:010, New process operations:

- i. To provide reasonable assurance that the particulate matter emission limitations are being met, the permittee shall monitor the amount and type of process weight added to each particulate matter emissions unit. The process weight shall be determined as the average hourly tons added to the emission unit averaged over a one month period. Average particulate emissions shall be calculated as follows:

Hourly Emission Rate = [Monthly processing rate x Emission Factor as determined from AP-42 * / (Hours of operation per month)] (1-Control Efficiency)

- * If an Emission Factor other than that taken from AP-42 is used, documentation on how that Emission Factor was derived must be submitted to the Division's Central Office for approval

- ii. Compliance with the opacity limits shall be demonstrated through the following methods:

The permittee shall perform the monitoring and recordkeeping requirements listed under 4. Specific Monitoring Requirements and 5. Specific Recordkeeping Requirements during all periods.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. Testing Requirements:

Testing shall be conducted at such times as may be required by the Cabinet in accordance with 401 KAR 59:005, § 2(2) and 50:045, § 4.

4. Specific Monitoring Requirements:

- a. The total monthly processing rate.
- b. The hours per month of the operation of the unit(s).
- c. On a monthly basis, the permittee shall monitor all materials containing HAP(s), each HAP, and total HAP(s) emissions.
- d. Observations of visible emissions from each emission points shall be made monthly. If visible emissions are seen during the observation, Method 9 shall be used to determine the opacity.

5. Specific Recordkeeping Requirements:

- a. The total monthly processing rate.
- b. The hours per month of the operation of the unit(s).
- c. All materials containing HAP(s), each HAP, and total HAP(s) emissions on a monthly basis.
- d. A log shall be kept of all emission observations. Notation in the monthly log shall be made of the following:
 - i. Monthly observations of visible emissions during operation of associated equipment.
 - ii. Observations of visible emissions during all periods of control equipment malfunction.
 - iii. If visible emissions are seen during the observation, Method 9 readings.

6. Specific Reporting Requirements:

Any exceedance over the opacity or particulate emission limits as stated in this permit shall be reported to the Division as specified in Section C - General Conditions, 3. The company shall certify to the Division, annually, whether a monthly visible emission survey was conducted for this emission point, and whether the emission point was in compliance with the applicable opacity requirements.

7. Specific Control Equipment Operating Conditions:

None.

8. Alternate Operating Scenarios: N/A

SECTION C - GENERAL CONDITIONS

1. Administrative Requirements

- a. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:040, Section 3(1)(b) and is grounds for enforcement action including but not limited to the termination, revocation and reissuance, or revision of this permit.
- b. This permit shall remain in effect for a fixed term of ten (10) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division. [401 KAR 52:040, Section 15]
- c. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a-11 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- d. Pursuant to materials incorporated by reference by 401 KAR 52:040, this permit may be revised, revoked, reopened, reissued, or terminated for cause. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance shall not stay any permit condition [Section 1a-4, 5, of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- e. This permit does not convey property rights or exclusive privileges [Section 1a-8 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- f. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:040 Section 11(3)].
- g. All previously issued permits to this source at this location are hereby null and void.

SECTION C - GENERAL CONDITIONS (CONTINUED)**2. Recordkeeping Requirements**

- a. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of at least five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [401 KAR 52:040 Section 3(1)(f) and Section 1b-IV-2 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- b. The permittee shall perform compliance certification and recordkeeping sufficient to assure compliance with the terms and conditions of the permit. Documents, including reports, shall be certified by a responsible official pursuant to 401 KAR 52:040, Section 21.

3. Reporting Requirements

- a. (1) In accordance with the provisions of 401 KAR 50:055, Section 1, the permittee shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
 - i. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
 - ii. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.
- (2) The permittee shall promptly report deviations from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Reporting Requirement condition a.(1) above), the probable cause of the deviation, and corrective or preventive measures taken; to the Regional Office listed on the front of this permit within 30 days. Other deviations from permit requirements shall be included in the semiannual report [Section 1b-V-3 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- b. The permittee shall furnish information requested by the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the permit [Section 1a-6 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- c. Summary reports of monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation. The summary reports

SECTION C - GENERAL CONDITIONS (CONTINUED)

are due January 30th and July 30th of each year. All deviations from permit requirements shall be clearly identified in the reports. All reports shall be certified by a responsible official pursuant to 401 KAR 52:040, Section 21.

4. Inspections

In accordance with the requirements of 401 KAR 52:040, Section 3(1)(f) the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times. Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency:

- a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation.
- b. To access and copy any records required by the permit.
- c. Inspect, at reasonable times, any facilities, equipment (including monitoring and pollution control equipment), practices, or operations required by the permit.
- d. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

5. Emergencies/Enforcement Provisions

- a. The permittee shall not use as defense in an enforcement action, the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a-3 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- b. An emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
 - (1) An emergency occurred and the permittee can identify the cause of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
 - (4) The permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division within two working days after the time when emission limitations were exceeded due to the emergency and included a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
- c. Emergency provisions listed in General Condition 5.b are in addition to any emergency or upset provision contained in an applicable requirement [401 KAR 52:040, Section 22(1)].
- d. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof. [401 KAR 52:040, Section 22(2)].

SECTION C - GENERAL CONDITIONS (CONTINUED)**6. Compliance**

- a. Periodic testing or instrumental or non-instrumental monitoring, which may consist of record keeping, shall be performed to the extent necessary to yield reliable data for purposes of demonstration of continuing compliance with the conditions of this permit. For the purpose of demonstration of continuing compliance, the following guidelines shall be followed:
 - (1) Pursuant to 401 KAR 50:055, General compliance requirements, Section 2(5), all air pollution control equipment and all pollution control measures proposed by the application in response to which this permit is issued shall be in place, properly maintained, and in operation at any time an affected facility for which the equipment and measures are designed is operated, except as provided by 401 KAR 50:055, Section 1.
 - (2) All the air pollution control systems shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers. A log shall be kept of all routine and nonroutine maintenance performed on each control device. Daily observations are required during daylight hours of all operations, control equipment and any visible emissions to determine whether conditions appear to be either normal or abnormal. If the operations, controls and/or emissions appear to be abnormal, the permittee must then comply with the requirements of Section C – General Conditions, 3.a.(2), of this permit.
 - (3) A log of the monthly raw material consumption and monthly production rates shall be kept available at the facility. Compliance with the emission limits may be demonstrated by computer program, spread sheets, calculations or performance tests as may be specified by the Division [401 KAR 50:055, Section 2].
- b. Pursuant to 401 KAR 52:040, Section 19, the permittee shall certify compliance with the terms and conditions contained in this permit by January 30th of each year, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an approved alternative) to the Regional Office listed on the front of this permit in accordance with the following requirements:
 - (1) Identification of the term or condition;
 - (2) Compliance status of each term or condition of the permit;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The method used for determining the compliance status for the source, currently and over the reporting period, and
 - (5) For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

SECTION C - GENERAL CONDITIONS (CONTINUED)

- (6) The certification shall be postmarked by January 30th of each year. Annual compliance certifications shall be mailed to the following addresses:

Division for Air Quality
Frankfort Regional Office
643 Teton Trail, Suite B
Frankfort, KY 40601

Division for Air Quality
Central Files
803 Schenkel Lane
Frankfort, KY 40601-1403

- c. Permit Shield - A permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with all:
- (1) Applicable requirements that are included and specifically identified in this permit; or
 - (2) Non-applicable requirements expressly identified in this permit [401 KAR 52:040, Section 11].

7. Construction Requirements:

NA

SECTION D - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:040, Section 6. While these activities are designated as insignificant the permittee shall comply with the applicable regulation and any level of periodic monitoring specified below.

<u>Description</u>	<u>Generally Applicable Regulation</u>
1. EP 35 (66-69) Parallel Flow Manufacturing	401 KAR 59:010
2. EP 36 (70 and 71) Charge Air Cooler	NA
3. EP 34 (62-65) Controlled Air Braze Furnace	401 KAR 59:010
4. EP 37 (72) Manual and Robotic Welders	401 KAR 59:010
5. EP 10 (21) and EP 11 (22) Solder Repair Stations	401 KAR 59:010
6. EP 30 (47 to 55) hand Brazing Operations	401 KAR 59:010
7. EP 22 (26) Mig Welding Operations (3)	401 KAR 59:010
8. EP 44 () Ultrasonic Soldering	401 KAR 59:010
9. EP 31 (46) Maintenance Repair Stations	401 KAR 59:010
10. EP 24, 25, and 25A Cleaning/coating	401 KAR 59:010
11. EP 57 (57) Coil Braze Heated Air Make-up unit	NA
12. EP 58 (58) Coil Braze Heated Air Make-up unit	NA
13. EP 59 (59) Coil Braze Heated Air Make-up unit	NA
14. EP 39 () New Heated Air Make-up Units (2)	NA
15. EP 32 (20 and 29) Charge/Test Booth	NA